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oregSUPPLEMENTAL AMENDMENT

An RCE (request for continued prosecution) was filed on Jan. 17, 2003 for this case along with a preliminary amendment adding new claims 16 and 17. In review of this application, it became clear that the original claims could be made more representative of the invention and, at the same time, become more easily searched by the Examiner. This supplemental amendment presents such claims.

Please delete all claims in the case and add the following new claims 18 -44.

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Claim 18. A substrate for re-orienting a die-down die to a die-up orientation, the die-down die defining electrical contacts, the substrate comprising:

a plurality of electrically conductive leads defining first contacts, the first contacts arranged to accept electrical connections from the electrical contacts of die-down die, and wherein the electrical leads define second contacts, the second contacts arranged to correspond to the die-up orientation.

Claim 19. The substrate of claim 18 further comprising:

electrically conductive wires joining the electrical contacts of the die-down die to the first contacts on the substrate,

a package arranged to receive a die-up die, the package with third contacts arranged for making electrical connections to a die-up die, and

electrically conductive wires joining the second contacts on the substrate to the third contacts.

Claim 20. The substrate of claim 19 wherein the package includes a lead frame wherein the third contacts are formed as part of the lead frame, and wherein the lead frame defines fourth contacts, wherein the fourth contacts are arranged to make electrical connections to a printed circuit board.

Claim 21. The substrate of claim 19 further comprising non-conductive means attaching the substrate to the die-down die.